REMARKS

Claims 1-41 are currently pending in the subject application and are presently under consideration. Claims 1, 12, 16, 26, and 41 have been amended as shown on pp. 2-9 of the Reply.

Applicants' representative thanks Examiner Baum for the courtesies extended during the telephonic interview conducted on August 7, 2007. The Examiner was contacted to discuss the rejections under 35 U.S.C. § 102 and interpretation of the cited prior art references with respect to limitations of independent claims 1, 12, 16, 17, 26, 30, 31, 39, and 41. No agreement was reached.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claims 1-41 Under 35 U.S.C. §102(b)

Claims 1-41 stand rejected under 35 U.S.C. §102(b) as being anticipated by Swiler *et al.*, U.S. Patent 7,013,395 B1. It is requested that this rejection be withdrawn for at least the following reasons. Swiler *et al.* does not disclose each and every element of the claimed subject matter.

> A single prior art reference anticipates a patent claim only if it expressly or inherently describes ***each and every limitation set forth in the patent claim***. *Trintec Industries, Inc. v. Top-U.S.A. Corp.,* 295 F.3d 1292, 63 USPQ2d 1597 (Fed. Cir. 2002); *See Verdegaal Bros. v. Union Oil Co. of California,* 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). ***The identical invention must be shown in as complete detail as is contained in the ... claim***. *Richardson v. Suzuki Motor Co.,* 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (emphasis added).

The claimed subject matter relates to a tool that provides an automated process, component, and that generates a set (or subset) of security guidelines, security data, and/or security components. An input to the tool can be in the form of an abstract description or model of a factory, wherein the factory description includes one or more assets to be protected, and associated pathways to access the assets. Security data generated by the tool includes a set of recommended security components, related interconnection topology, connection configurations, application procedures, security policies, rules, user procedures, and/or user practices. (*See* Specification, paragraph 9). Toward this end, claim 1 (and similarly claims 12, 16, and 41) recites a security analysis tool for an automation system, comprising: *an interface component to generate a description of factory assets,* ***wherein the description includes at least one of shop floor access patterns, Intranet access patterns, Internet access patterns, and wireless access patterns***. Swiler *et al.* fails to disclose such claimed aspects.

Swiler *et al.* describe modeling network risks based on an attack graph. Each node in the graph represents a possible attack state. A node contains information about the physical machine(s) the attacker has accessed, the user privilege level the attacker has gained, and effects of the attack so far, such as placement of Trojan horses or modification of access control. Edges represent a change of state caused by a single action taken by the attacker (including normal user transitions if they have gained access to a normal user's account) or actions taken by an unwitting assistant (such as the execution of a Trojan horse). The attack graph is automatically generated given three types of input: attack templates, a configuration file, and an attacker profile. Attack templates represent a generic attack step including necessary and acquired security attributes (*e.g.*, attacker capabilities and/or system vulnerabilities). (*See* col. 4, lines 32-47).

However, Swiler *et al.* is silent with respect to the aforementioned claimed features of applicants' invention. In particular, Swiler *et al.* does not provide for a description that includes access patterns as in applicant's claimed invention.

In view of at least the foregoing, it is readily apparent that Swiler *et al.* does not teach or suggest the subject inventions as recited in independent claims 1, 12, 16, and 41 (and associated dependent claims). This rejection should be withdrawn.

Claim 17 (and similarly claim 26) recites a security validation system, comprising: *a scanner component to* ***automatically interrogate an automation system at periodic intervals*** *for security related data.* Swiler *et al.* fails to disclose such claimed aspects. Swiler *et al.* merely discloses automatically generating an attack graph. Swiler *et al.* is silent with respect to the claimed functionality of automatically interrogating an automation system at periodic intervals.

In view of at least the foregoing, it is readily apparent that Swiler *et al.* does not teach or suggest the subject inventions as recited in independent claims 17 and 26 (and associated dependent claims). This rejection should be withdrawn.

Claim 30 recites an automated security validation system, comprising: *means for scanning one or more networks or automation devices for potential security violations; means for initiating a security procedure in response to the security violations; and means for performing at least one of security assessments, security compliance checks; and security vulnerability scanning* ***to mitigate the security violations***. Swiler *et al.* fails to disclose such claimed aspects. Swiler *et al.* merely discloses automatically generating an attack graph. Swiler *et al.* is silent with respect to the claimed functionality of mitigating a security violation.

In view of at least the foregoing, it is readily apparent that Swiler *et al.* does not teach or suggest the subject inventions as recited in independent claim 30. This rejection should be withdrawn.

Claim 31 recites a security learning system for an automation environment, comprising*:* ***a learning component to monitor and learn automation activities during a training period****; and a detection component to automatically trigger a security event based upon detected deviations of subsequent automation activities after the training period*. Swiler *et al.* fails to disclose such claimed aspects. Swiler *et al.* merely discloses automatically generating an attack graph. Swiler *et al.* is silent with respect to the claimed functionality of monitoring and learning automation activities during a training period.

In view of at least the foregoing, it is readily apparent that Swiler *et al.* does not teach or suggest the subject inventions as recited in independent claim 31 (and associated dependent claims). This rejection should be withdrawn.

Claim 39 recites a security learning method, comprising**:** ***monitoring a network for a predetermined time; automatically learning at least one data pattern during the predetermined time****; and generating an alarm if a current data pattern is determined to be outside of a predetermined threshold associated with the at least one data pattern.*

Swiler *et al*. fails to disclose such claimed aspects. Swiler *et al*. merely discloses automatically generating an attack graph. Swiler *et al*. is silent with respect to the claimed functionality of monitoring a network for a predetermined time and automatically learning at least one data pattern during the predetermined time.

In view of at least the foregoing, it is readily apparent that Swiler *et al*. does not teach or suggest the subject inventions as recited in independent claim 39 (and associated dependent claim 40). This rejection should be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,
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